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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,046	01/17/2002	Joseph F. Arnold	1823.0560000	1183
26111	7590	12/30/2003	EXAMINER	
STERNE, KESSLER, GOLDSTEIN & FOX PLLC 1100 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			VALENTIN, JUAN D	
			ART UNIT	PAPER NUMBER
			2877	

DATE MAILED: 12/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/050,046

Applicant(s)

ARNOLD ET AL.

Examiner

Juan D Valentin II

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 18-27,30-33,35 and 36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-20,23,25,27,30,32,35 and 36 is/are rejected.
- 7) ☒ Claim(s) 21,22,24,26,31 and 33 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. The indicated allowability of claim 18 is withdrawn in view of the newly discovered reference(s) to Okamoto et al. (USPN '749 B1). Rejections based on the newly cited reference(s) follow.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 18-20 & 27 rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto et al. (USPN '749 B1, hereinafter Okamoto) in view of Wendt et al. (USPN '200 B1, hereinafter Wendt).

#### **Claim 18**

Okamoto discloses in conjunction with Fig. 12B, an illumination system that provides illumination for a platen in a print scanner, comprising a light wedge having one surface that receives light emitted from said illumination source array and a reflective surface that reflects light out of said light wedge toward the platen, whereby, uniform illumination is provided to the platen (col. 8, lines 45-61).

Okamoto substantially teaches the claimed invention except that it fails to show an illumination source array that emits light from a plurality of discrete light sources. Wendt shows

that it is known to provide an illumination source array that emits light from a plurality of discrete light sources (col. 4, lines 22-38) for an optical fingerprint imager. It would have been obvious to someone of ordinary skill in the art to combine the device of Okamoto with the illumination array of Wendt for the purposes of providing high intensity light to be directed to the platen (col. 4, lines 24-25). Accordingly, such modification would have constituted an alternative means/obvious engineering expedience for one of ordinary skill in the art at the time the invention was made.

**Claim 19**

Okamoto in view of Wendt discloses an illumination system further comprising a diffuser provided near said light wedge such that light passing out from said light wedge passes through said diffuser before illuminating the platen (col. 9, lines 60-67).

**Claim 20**

Okamoto in view of Wendt discloses an incident-light-beam converging means is arranged such that means for diffusing the light beam and means for making the light beam parallel or convergent are formed integrally (Okamoto, col. 2, lines 40-44). Referring to first Fig. 10B, in order for the diffusing means to be integrally formed with the means for making the light beam parallel (collimating), then collimating mirror 17 located on the reflecting surface must be a diffuser. Next, Fig. 12B shows a light wedge with a diffuser/collimating lens on a surface thereof. It is the position of the Office that it would have been obvious to someone of ordinary skill in the art at the time of the claimed invention to combine the light wedge disclosed in Fig. 12B with the diffuser/collimator located on the reflecting surface of Fig. 10B.

**Claim 27**

Okamoto discloses in conjunction with Fig. 12B, a method for providing efficient, uniform illumination to a platen, comprising emitting light, passing the emitted light through a light wedge to obtain diffuse light, and illuminating the platen with the collimated diffuse light such that an image of a print of a finger or palm placed on the platen can be obtained (col. 8, lines 45-61 & col. 2, lines 40-44).

Okamoto substantially teaches the claimed invention except that it fails to show an illumination source array that emits light from a plurality of discrete light sources. Wendt shows that it is known to provide an illumination source array that emits light from a plurality of discrete light sources (col. 4, lines 22-38) for an optical fingerprint imager. It would have been obvious to someone of ordinary skill in the art to combine the device of Okamoto with the illumination array of Wendt for the purposes of providing high intensity light to be directed to the platen (col. 4, lines 24-25). Accordingly, such modification would have constituted an alternative means/obvious engineering expedience for one of ordinary skill in the art at the time the invention was made.

3. Claims 23 & 30 rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto in view of Wendt and further in view of Fernandez (USPN '981 B1).

**Claims 23 & 30**

Okamoto in view of Wendt substantially teaches the claimed invention except that it fails to show wherein said illumination source array comprises a plurality of sources that emit blue/green light. Fernandez shows that it is known to provide an illumination source array

comprises a plurality of sources that emit blue/green light (col. 13, lines 20-23 & col. 16, lines 52-54) for an apparatus for imaging fingerprints. It would have been obvious to someone of ordinary skill in the art to combine the device of Okamoto in view of Wendt with the blue/green light illumination of Fernandez for the purposes of imaging and documenting fingerprints. Accordingly, such modification would have constituted an alternative means/obvious engineering expedience for one of ordinary skill in the art at the time the invention was made.

4. Claim 25 & 32 rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto in view of Wendt and further in view of Johnson (USPN '969 B2).

**Claims 25 & 32**

Okamoto in view of Wendt substantially teaches the claimed invention except that it fails to further comprising independently controlling the intensity of each source relative to other sources such that a flat uniform illumination is provided to the platen. Johnson shows that it is known to provide independently controlling the intensity of each source relative to other sources such that a flat, uniform illumination is provided to the platen (col. 4, lines 22-59) for a finger print reader. It would have been obvious to someone of ordinary skill in the art to combine the device of Okamoto in view of Wendt with the independently controlling the intensity of each source of Johnson for the purposes of providing sequentially triggered light-emitting diode illumination on a finger.

5. Claims 35 & 36 rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto in view of Fernandez.

**Claims 35 & 36**

Okamoto discloses illuminating a platen, having an object with a pattern of ridges and valleys thereon (col. 8, lines 45-61).

Okamoto substantially teaches the claimed invention except that it fails to show emitting light in a blue/green spectrum from a plurality of discrete sources. Fernandez shows that it is known to provide an illumination source array comprises a plurality of discrete sources that emit blue/green light (col. 13, lines 20-23 & col. 16, lines 52-54) for an apparatus for imaging fingerprints. It would have been obvious to someone of ordinary skill in the art to combine the device of Okamoto with the blue/green light illumination of Fernandez for the purposes of imaging and documenting fingerprints. Accordingly, such modification would have constituted an alternative means/obvious engineering expedience for one of ordinary skill in the art at the time the invention was made. It is the position of the Office that Fernandez teaches the use of blue/green light to detect a latent fingerprint. It would have been obvious for someone of ordinary skill in the art at the time of the claimed invention to use light from the blue/green spectrum at 450 nm or slightly larger as taught by Fernandez in a optical fingerprint detection system. Official notice taken. It is the position of the Office that the blue/green spectrum encompasses the frequency of 510 nm that is slightly larger than the 450 nm disclosed by Fernandez.

*Allowable Subject Matter*

6. Claims 21, 22, 24, 26, 31, & 33 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 21, the prior art fails to disclose or make obvious wherein said diffuser comprises a holographic diffuser and in combination with the other recited limitations of claims 18.

Regarding claim 21, the prior art fails to disclose or make obvious wherein said diffuse, reflective surface comprises one roughened surface of the light wedge coated by a layer of reflective paint and in combination with the other recited limitations of claims 18.

Regarding claims 24 & 31, the prior art fails to disclose or make obvious an illumination system wherein a plurality of sources are divided into at least a center region and a perimeter region, wherein the density of sources provided in said perimeter region is greater than in said center region and in combination with the other recited limitations of claims 18 & 27.

Regarding claims 26 & 33, the prior art fails to disclose or make obvious a plurality of sources is divided into at least three groups in at least three respective zones and in combination with the other recited limitations of claim 18 & 27.

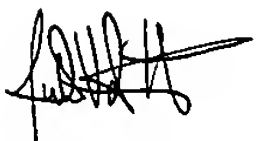


***Conclusion***

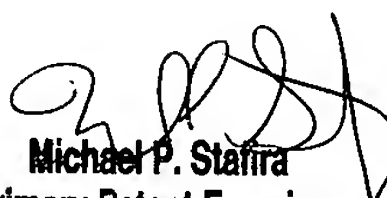
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juan D Valentin II whose telephone number is (703) 605-4226 (after January 21, 2004 – (571) 272-2433). The examiner can normally be reached on M-Th., Every other Fr..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on (703) 308-4881 (after January 21, 2004 – (571) 272-2415). The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308- 0955.



Juan D Valentin II  
Examiner 2877  
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December 15, 2003



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